NPTEL Video Course - Chemical Engineering - NOC:Polymers: Concepts, Properties, Uses and Sustainability

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Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 30 - Microstructure in polymers
Lecture 31 - Composites
Lecture 32 - Stress strain response
Lecture 33 - Additives for polymeric systems
Lecture 34 - Blends/composites in recycling
Lecture 35 - Physical/chemical crosslinking
Lecture 36 - Mechanical properties - I
Lecture 37 - Mechanical properties - II
Lecture 38 - Physical and chemical aging
Lecture 39 - Solutions
Lecture 40 - Conducting polymers
Lecture 41 - Dielectric response - I
Lecture 42 - Dielectric response - II
Lecture 43 - Plasticity
Lecture 44 - Properties of composites
Lecture 45 - Viscoelasticity
Lecture 46 - Thermal response
Lecture 47 - Viscoelasticity
Lecture 48 - Viscoelasticity
Lecture 49 - Dynamic Mechanical analysis
Lecture 50 - Damping Applications
Lecture 51 - Time Temperature superposition
Lecture 52 - Impact and energy absorption
Lecture 53 - Testing for applications
Lecture 54 - Properties of blends
Lecture 55 - Biomimetic polymers
Lecture 56 - Advanced mechanics
Lecture 57 - Viscoelastic response
Lecture 58 - Polymer packaging
Lecture 59 - Porous polymers/membranes
Lecture 60 - Polymer at interfaces
Lecture 61 - Diffusion in polymers
Lecture 62 - Compatibilizers
Lecture 63 - Biopolymer applications
Lecture 64 - Adhesives and Paints
Lecture 65 - Dissolution and recovery
Lecture 66 - Polymerization kinetics
Lecture 67 - Polymerization reactors
Lecture 68 - Polymer processing - I

Lecture 69 - Polymer processing - II
Lecture 70 - Polymer processing - III
Lecture 71 - Flow simulations
Lecture 72 - Processing for recycling
Lecture 73 - Recycle, up-down cycling - I
Lecture 74 - Recycle, up-down cycling - II
Lecture 75 - Flow behaviour - rheology
Lecture 76 - Crosslinking
Lecture 77 - Conversion of polymers
Lecture 78 - Rheology and entanglement
Lecture 79 - Rheological models
Lecture 80 - Rheology and processing
Lecture 81 - Absorption and leaching
Lecture 82 - Swelling of polymers
Lecture 83 - Viscosity for polymer processing
Lecture 84 - Microplastics, aerosols, sediments
Lecture 85 - Biodegradation of polymers
Lecture 86 - Biodegradable polymers - 1
Lecture 87 - Biodegradable polymers - 2